



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

State of Maine
Cross Office Building
Kennebec County
Augusta, Maine
A-659-71-C-R (SM)

Departmental
Findings of Fact and Order
Air Emission License

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

The State of Maine Cross Office Building (COB) of Augusta has applied to renew their air emissions license permitting the operation of emission sources associated with their facility. COB has also requested to have the emergency generator part of the ISO Demand Response Program and has removed its previously licensed parts washer.

B. Emission Equipment

COB is licensed to operate the following equipment:

Fuel Burning Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type, % sulfur	Stack #
Boiler #1	14.6	102.1	#2 fuel oil *	1
Boiler #2	8.4	58.3	#2 fuel oil *	1
Boiler #3	12.5	83.5	#2 fuel oil *	1

* COB will use fuel which meets the criteria in ASTM D396 for #2 fuel oil

Electrical Generation Equipment

Equipment	Power Output (kW)	Firing Rate (gal/hr)	Stack #
Generator #2	500	35.8	2

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04679-2094
(207) 764-0477 FAX: (207) 760-3143

C. Application Classification

The application for COB does not include the licensing of increased emissions or the installation of new or modified equipment. The revision to have their emergency generator as part of the ISO Demand Response program will not increase permitted emissions of any pollutant. Therefore, the license is considered to be a renewal and minor revision of current licensed emission units only and has been processed through Major and Minor Source Air Emission License Regulations, 06-096 CMR 115 (last amended December 24, 2005). With the fuel limit on Boilers #1, #2, and #3 and the operating hours restriction on the emergency generator, the facility is licensed below the major source thresholds and is considered a synthetic minor.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in the Definitions Regulation, 06-096 CMR 100 (last amended December 24, 2005). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers #1, #2, and #3

COB operates Boilers #1, #2, and #3 primarily for hot water and heating needs. COB uses #2 fuel oil which meets the criteria in ASTM D396.

Boiler #1 was installed in 1998 with a maximum heat input of 14.6 MMBtu/hr. Therefore, Boiler #1 is subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

Boiler #2 has a maximum heat input of 8.4 MMBtu/hr and is therefore not subject to NSPS Subpart Dc.

Boiler #3 was installed in 1978 and is therefore not subject to NSPS Subpart Dc.

A summary of the BPT analysis for Boilers #1, #2, and #3 is the following:

1. The total fuel use for the facility shall not exceed 400,000 gal/year of #2 fuel oil, based on a 12 month rolling total.
2. The SO₂ emission limits are based on the firing of fuel which meets the criteria in ASTM D396 for #2 fuel oil.
3. Fuel Burning Equipment Particulate Emission Standard, 06-096 CMR 103 (last amended November 3, 1990) regulates PM emission limits. The PM₁₀ limits are derived from the PM limits.
4. NO_x emission limits are based on data from similar #2 fired boilers of this size and age.
5. CO and VOC emission limits are based upon AP-42 data dated 9/98.
6. Visible emissions from the boilers shall each not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period.

C. Generator #2

COB operates Generator #2 as a back up emergency diesel generator. The back-up generator is only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Generator #2 was ordered prior to July 11, 2005 and manufactured prior to April 1, 2006. Therefore, Generator #2 is not subject to New Source Performance Standards 40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

Back-up generators are not to be used for prime power when reliable offsite power is available. However, COB has requested a minor revision to be part of the ISO Demand Response program.

Revision Description for back-up generator

COB has requested allowance to operate its diesel generator as part of the ISO Demand Response Program. COB's current air emission license specifically prohibits them from running their emergency generator, for purposes other than for regular maintenance, until off-site power becomes unavailable. That is the point at which the term "emergency" has traditionally been applied.

Due to the potential for tight electricity supplies, ISO New England has taken several precautionary steps to ensure the reliability of the region-wide bulk power

system. One of those steps is the implementation of the Demand Response Program. This program offers financial incentives to customers, such as COB, to reduce electricity demand during peak periods. This program can significantly improve the reliability of the region-wide bulk power system and hopefully allow ISO New England to avoid drastic measures, such as brown outs.

In order for COB to participate in the Demand Response Program, they need to start their generator and run it prior to, or in lieu of, loss of off-site power. COB will only operate in this manner if there is a documented request from ISO New England under their emergency OP-4 procedures. ISO New England's OP-4 is a procedure which establishes criteria and guidelines for actions during capacity deficiencies. OP-4 is implemented when there is determined to be a serious threat to the integrity of the bulk power system. Therefore, the Department has agreed to redefine the term "emergency" as it applies to COB's generator to include ISO New England OP-4 emergencies. Additionally, COB shall only be permitted to operate their generator in response to an OP-4 emergency for a total of no more than 50 hours each calendar year. This revision will not increase permitted emissions of any pollutant.

A summary of the BPT analysis for Generator #2 (500 kW) is the following:

1. The back-up generator shall fire only diesel fuel with a maximum sulfur content not to exceed 0.05% by weight.
2. The back-up generator shall be limited to 500 hr/yr of operation based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.
3. 06-096 CMR 106 regulates fuel sulfur content, however in this case a BPT analysis for SO₂ determined a more stringent limit of 0.05% was appropriate and shall be used.
4. 06-096 CMR 103 regulates PM emission limits. The PM₁₀ limits are derived from the PM limits.
5. NO_x, CO, and VOC emission limits are based upon AP-42 data dated 10/96.
6. Visible emissions from the back-up generator shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

D. Annual Emission Restrictions

COB shall be restricted to the following annual emissions, based on a 12-month rolling total:

Total Licensed Annual Emission for the Facility
(used to calculate the annual license fee)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boilers #1, #2, #3	3.4	3.4	14.1	9.8	1.0	0.1
Generator #2	0.2	0.2	0.1	3.9	1.0	0.1
Total TPY	3.6	3.6	14.2	13.7	2.0	0.2

III. AMBIENT AIR QUALITY ANALYSIS

According to the 06-096 CMR 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

Pollutant	Tons/Year
PM	25
PM ₁₀	25
SO ₂	50
NO _x	100
CO	250

Based on the above total facility emissions, COB is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-659-71-C-R subject to the following conditions:

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This

License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records

- for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - 2. pursuant to any other requirement of this license to perform stack testing.
 - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. submit a written report to the Department within thirty (30) days from date of test completion.
- [06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

- B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

- (16) Boilers #1, #2, and #3
- A. Total fuel use for the facility shall not exceed 400,000 gal/yr of #2 fuel oil. [06-096 CMR 115]
 - B. COB shall fire in the boilers only fuel oil which meets the requirement of ASTM D396 for #2 oil. [06-096 CMR 115]
 - C. Compliance with Conditions (16)(A) and (B) above shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the

percent sulfur of the fuel. Records of annual fuel use shall be kept on a 12-month rolling total basis. [06-096 CMR 115]

D. Emissions shall not exceed the following [06-096 CMR 115]:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #1	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	1.75	1.75	7.35	5.11	0.52	0.02
Boiler #2	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	1.01	1.01	4.23	2.94	0.30	0.02
Boiler #3	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	1.50	1.50	6.29	4.38	0.45	0.02

E. Visible emissions from the boilers shall each not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

(17) **New Source Performance Standards for Dc Boilers**

Boilers #1 is subject to Federal New Source Performance Standards, Subpart Dc. COB shall comply with all requirements of 40 CFR Part 60, Subpart Dc including, but not limited to, the following:

- A. COB shall record and maintain records of the amounts of each fuel combusted during each day. The fuel supplier certification must contain the name of the oil supplier and a statement from the oil supplier that the oil complies with ASTM specifications for #2 fuel oil.
- B. COB shall submit to EPA and the Department semi-annual reports. These reports shall include the calendar dates covered in the reporting period and records of fuel supplier certifications. The semi-annual reports are due within 30 days of the end of each 6-month period.
- C. The following address for EPA shall be used for any reports or notifications required to be copied to them:

Compliance Clerk
USEPA Region 1
1 Congress Street
Suite 1100
Boston, MA 02114-2023

(18) **Generator #2**

- A. COB shall limit Generator #2 to 500 hr/yr of operation (based on a 12 month rolling total). An hour meter shall be maintained and operated on Generator #2. [06-096 CMR 115]
- B. A log documenting the dates, times, and reason of operation for Generator #2 shall be kept. [06-096 CMR 115]
- C. Generator #2 shall fire diesel fuel with a sulfur limit not to exceed 0.05% by weight. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. [06-096 CMR 115]
- D. Emissions shall not exceed the following [06-096 CMR 115]:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Generator #2	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.59	0.59	0.25	15.62	4.15	0.44

- E. Visible emissions from Generator #2 shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

(19) **OP-4 Emergencies**

- A. COB shall only operate the emergency generator for periods of maintenance, emergencies when off-site power is unavailable, and ISO New England OP-4 emergencies. [06-096 CMR 115, BPT]
- B. COB shall keep records for OP-4 emergencies which include the date, start time and stop time for the generator, and documentation that COB was contacted by ISO New England and asked to reduce consumption as part of an OP-4 event. [06-096 CMR 115, BPT]
- C. COB shall not operate the emergency generator for more than 50 hours per calendar year in response to an OP-4 emergency. [06-096 CMR 115, BPT]

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A-659-71-C-R (SM)

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**Departmental
Findings of Fact and Order
Air Emission License**

- (20) COB shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 26th DAY OF October, 2009.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: James P. Brookings
DAVID P. LITTELL, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: June 17, 2008

Date of application acceptance: July 3, 2008

Date filed with the Board of Environmental Protection: _____

This Order prepared by Edwin Cousins, Bureau of Air Quality.

